UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
2004/00368

July 21, 2004

Mr. Lawrence C. Evans
U.S. Army Corps of Engineers
Portland District, CENWP-CO-GP
P.O. Box 2946
Portland, Oregon 97208-2946

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the City of Pendleton, Bob White Trail Project, Umatilla River Subbasin, Umatilla County, Oregon (Corps No.: 200400147)

Dear Mr. Evans:

Enclosed is a biological opinion (Opinion) prepared by NOAA's National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act (ESA) for the issuance of a permit under section 404 of the Clean Water Act to the City of Pendleton for constructing a pedestrian pathway around the Union Pacific Railroad (UPRR) trestle as part of the Bob White Trail Project, in Umatilla County, Oregon. The Corps of Engineers (COE) determined that the action may adversely affect Middle Columbia River steelhead (*Oncorhynchus mykiss*) and requested formal consultation on this action. NOAA Fisheries concludes in this Opinion that the proposed action is not likely to jeopardize the continued existence of the ESA-listed species.

Pursuant to section 7 of the ESA, NOAA Fisheries includes reasonable and prudent measures with non-discretionary terms and conditions that NOAA Fisheries believes are necessary and appropriate to minimize the potential for incidental take associated with this project.

This document also serves as consultation on essential fish habitat (EFH) pursuant to section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and its implementing regulations (50 CFR Part 600). NOAA Fisheries concludes that the proposed action will adversely affect designated EFH for Chinook salmon (*O. tshawytscha*). As required by section 305(b)(4)(A) of the MSA, NOAA Fisheries includes conservation recommendations that NOAA Fisheries believes will avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from the proposed action. As described in the enclosed consultation, 305(b)(4)(B) of the MSA requires that a Federal action agency must provide a detailed response in writing within 30 days after receiving an EFH conservation recommendation.

Questions regarding this letter should be directed to Donald Hubner of my staff in the Eastern Oregon Habitat Branch of the Oregon State Habitat Office at 541.975.1835, ext. 223.

Sincerely,

Russell M Strach for

D. Robert Lohn
Regional Administrator

cc: Mary Headley, COE
Tim Bailey, ODFW
Gary Miller, USFWS

Endangered Species Act - Section 7 Consultation
Biological Opinion

&

Magnuson-Stevens Fishery Conservation and Management Act
Essential Fish Habitat Consultation

City of Pendleton, Bob White Trail Project,
Umatilla River Subbasin, Umatilla County, Oregon
(COE No. 200400147)

Agency:	Corps of Engineers
Consultation Conducted By:	NOAA's National Marine Fisheries Service, Northwest Region
Date Issued:	July 21, 2004
Issued by:	Russell M Strach for _____ D. Robert Lohn Regional Administrator
Refer to:	**2004/00368**

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1. INTRODUCTION

The Endangered Species Act (ESA) of 1973 (16 USC 1531-1544), as amended, establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat on which they depend. Section 7(a)(2) of the ESA requires Federal agencies to consult with NOAA's National Marine Fisheries Service (NOAA Fisheries) and U.S. Fish and Wildlife Service (USFWS) (together "Services"), as appropriate, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or adversely modify or destroy their designated critical habitats. This biological opinion (Opinion) is the product of an interagency consultation pursuant to section 7(a)(2) of the ESA and implementing regulations in
50 CFR 402.

The analysis also fulfills the essential fish habitat (EFH) requirements under the Magnuson-Stevens Fishery Conservation and Management Act (MSA). The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established procedures designed to identify, conserve, and enhance EFH for those species regulated under a Federal fisheries management plan. Federal agencies must consult with NOAA Fisheries on all actions, or proposed actions, authorized, funded, or undertaken by the agency, that may adversely affect EFH (section 305(b)(2)).

The U.S. Army Corps of Engineers, Portland District (COE), proposes to permit, under section 404 of the Clean Water Act, the City of Pendleton Bob White Trail Project (Project). The purpose of the proposed Project is to provide a non-vehicular, hard-surfaced path under the Union Pacific Railroad (UPRR) mainline to allow pedestrians and bicyclists safe and convenient movement through the railroad right-of-way. The administrative record for this consultation is on file at the Oregon State Habitat Office.

1.1 Background and Consultation History

On April 2, 2004, NOAA Fisheries received a letter from the COE with attached Project and environmental information from the City of Pendleton. The COE requested ESA section 7 formal consultation with a determination for the proposed Project of "may affect, likely to adversely affect" (LAA) Middle Columbia River (MCR) steelhead (*Oncorhynchus mykiss*). Formal consultation was initiated at this time.

On April 8, 2004, NOAA Fisheries recommended that the COE provide additional information about the project design, streambank composition, and the basin-wide environmental baseline to facilitate consultation. NOAA Fisheries participated in a Project site visit with City of Pendleton project engineers, COE, and USFWS on April 21, 2004. Although most of the requested information was received during this site visit, environmental baseline information was not provided.

On June 10, 2004, NOAA Fisheries informed the COE that, due to the possible presence of MCR steelhead in the Project area, terms and conditions in the incidental take statement of this Opinion would require a fish salvage plan.

1.2 Proposed Action

The City proposes to construct an 8-foot wide, concrete-surfaced path along the base of the eastern trestle of the UPRR bridge across the Umatilla River at river mile 54.8. The path will lie atop an approximately 155-foot long by 10-foot wide riprap- and rock-filled terrace laid beside the existing riprap structure that protects the railroad trestle. The path will have no guardrail or other structures that would be prone to snag and collect debris during high flow events.

Instream work will be completed between July 15 and August 15. This is within Oregon Department of Fish and Wildlife's (ODFW) preferred in-water work period for the area of July 15 to October 15 (ODFW 2000), and most of construction will take place from on top of or immediately beside existing riprap and railroad structures. Disturbed trees and shrubs will be replanted with appropriate native vegetation. However, revegetation efforts will be limited by UPRR's need to keep the right-of-way and structures free of large vegetation.

Conservation Measures Within Project Design

The following standard permit conditions and contractors' best management practices (BMPs) will be employed to minimize impacts on the aquatic environment.

- Heavy equipment will be operated from the bank and will not placed in the stream unless specifically authorized by the District Engineer.
- The construction boundary within riparian areas shall be as small as possible. Construction boundaries will be clearly marked before work begins.
- Native vegetation removed for construction will be successfully reestablished. Plantings shall start at the ordinary high water mark (OHWM), extend 10 feet back from the top of the bank, and will be completed by the end of the first planting season following the disturbance.
- Appropriate erosion control devices shall be installed and maintained in good working order throughout construction to prevent unauthorized discharge of material into the stream. Controls shall be maintained until permanent erosion controls are in place.
- All excess material will be disposed of at a suitable upland site in a manner that prevents discharge into waterways or wetlands.
- Activities will not restrict passage of aquatic life.
- Riprap shall be clean, durable, angular rock. Other material is not authorized.
- The permittee must allow COE-requested compliance inspections.

2. ENDANGERED SPECIES ACT

2.1 Biological Opinion

2.1.1 Biological Information

The MCR steelhead evolutionarily significant unit (ESU) was listed as threatened under the ESA on March 25, 1999 (64 FR 14517). Protective regulations for MCR steelhead were issued under section 4(d) of the ESA on July 10, 2000 (65 FR 42422).

MCR steelhead occupy the Columbia River basin upstream from and exclusive of the Wind River in Washington and the Hood River in Oregon to, and including, the Yakima River in Washington (Busby *et al.* 1996). The Snake River basin supports its own steelhead ESU and as such is excluded from the MCR basin. The MCR region includes some of the driest areas of the Pacific Northwest, averaging less than 16 inches of annual precipitation (Jackson 1993). The major tributaries occupied by this ESU are the Deschutes, John Day, Klickitat, Umatilla, Walla Walla, and Yakima river systems. The John Day River probably represents the largest native, naturally-spawning stock of steelhead in the region (NMFS 2000). This ESU includes both summer and winter spawning runs with summer steelhead widespread throughout the region and winter steelhead limited to tributaries below the Dalles Dam (Schreck *et al.* 1986; Chapman *et al.* 1994). Blockages by the Pelton Dam on the Deschutes River and the Condit Dam on the White Salmon River are the only substantial habitat blockages present in the area occupied by this ESU. However, other minor blockages occur throughout the region, and water withdrawals have seriously reduced summer flows. Overgrazing, logging, road building, and urbanization have degraded habitat in the principal summer steelhead spawning and rearing tributaries of the Deschutes, John Day, and Umatilla River systems.

Umatilla River steelhead typically spend 1 or 2 years in the ocean before reentering freshwater, where they may remain up to a year before spawning (Howell *et al.* 1985). Although some spawning occurs in the middle tributaries, most occurs in the upper mainstem and upper tributaries. Spawning normally begins in March and peaks between April and May. Fry emergence usually occurs from late May through June.

Juvenile steelhead typically rear for 2 years. In the Umatilla River basin, rearing mostly occurs along the Umatilla mainstem and in middle tributaries. Rearing juveniles face unfavorably high summer water temperatures throughout most of the Umatilla basin, especially in the mainstem. Consequently, most juveniles migrate back up into the cooler waters of the middle tributaries during the hot summer months. Smolt out-migration normally peaks in May but may extend into July or August, depending on water supply conditions (Childerhose and Trim 1979; Groot and Margolis 1991).

The current (1997-2001) 5-year average (geometric mean) return of natural MCR steelhead is up from previous years' basin estimates (NOAA Fisheries 2003). However, the Klickitat, Yakima, Touchet, and Umatilla systems are all below their interim abundance targets (Table 1). The

Deschutes is close to its target, but there is significant concern about stray fish from other ESUs entering that system. The John Day is the only system at or above its interim abundance target.

Table 1. Comparison of 5-Year Average (1997-2001) for Natural Returns against Interim Abundance Targets for the MCR Steelhead ESU (adapted from NOAA Fisheries 2003).

ESU/Spawning Aggregations	Natural Returns 5-Year Average	Interim Abundance Targets
Deschutes	5,113	5,400
John Day	total unavailable	8,500
John Day Upper Mainstem	2,037	2,000
Klickitat	total unavailable	3,600
Umatilla	**1,492**	**2,300**
Touchet (Walla-Walla)	298	900
Yakima	1,747	8,900

Population addressed in this Opinion is in bold.

For population levels to increase in the MCR steelhead ESU, the natural-origin population growth rate must exceed 1.0. Although the ESU's exact population growth rate is not known, it lies somewhere between best case estimates that assume no hatchery-origin fish account for natural production, and worst case estimates that assume both hatchery and wild fish contribute to natural production in proportion to their numbers. Short-term MCR native steelhead population growth rate estimates range between 1.045 and 0.967. However, the median long-term growth rate estimate lies between 0.98 and 0.97 (NOAA Fisheries 2003). Thus, despite recent increases in total steelhead returns to the basin, productivity of native MCR steelhead is slightly below its target and NOAA Fisheries' biological review team (BRT) has determined that the MCR ESU is likely to become endangered (NOAA Fisheries 2003).

2.1.2 Evaluating the Proposed Action

The standards for determining jeopardy are set forth in section 7(a)(2) of the ESA as defined by 50 CFR Part 402 (the consultation regulations). In conducting analyses of habitat altering actions under section 7 of the ESA, NOAA Fisheries uses the following steps: (1) Consider the status and biological requirements of the species; (2) evaluate the relevance of the environmental baseline in the action area to the species' current status; (3) determine the effects of the proposed or continuing action on the species; (4) consider cumulative effects; and (5) determine whether the proposed action, in light of the above factors, is likely to appreciably reduce the likelihood of species survival in the wild or adversely modify its critical habitat, or both.

2.1.3 Biological Requirements

Definition of the species' biological requirements within the action area is the first step NOAA Fisheries uses when applying ESA section 7(a)(2) to the listed ESU considered in this Opinion. Biological requirements are population and habitat characteristics necessary for the listed ESU to survive and recover to naturally-reproducing population sizes, at which time protection under the ESA would become unnecessary (McElhany *et al.* 2000).

For actions that affect freshwater habitat, NOAA Fisheries may describe the habitat portion of a species' biological requirements in terms of a concept called properly functioning condition (PFC). PFC is defined as the sustained presence of natural habitat-forming processes in a watershed that are necessary for the long-term survival of the species through the full range of environmental variation (NMFS 1999).

Important habitat features are: (1) Substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food (juvenile only), (8) riparian vegetation, (9) space, and 10) safe passage conditions (Bjornn and Reiser 1991; NOAA Fisheries 1996b; Spence *et al*. 1996). NOAA Fisheries typically considers the status of habitat features in a matrix of pathways and indicators (MPI) in which baseline environmental conditions are described as "properly functioning," "at risk," or "not properly functioning" (NOAA Fisheries 1996). The proper functioning of these habitat features is necessary to support successful adult and juvenile migration, adult holding, spawning, incubation, rearing, and the growth and development of juvenile fish to adulthood. With the exception of food, all of these features of habitat are included in the MPI. The habitat features most likely to be affected by the proposed project are substrate, water quality, water velocity, cover/shelter, food, and riparian vegetation.

2.1.4 Environmental Baseline

The environmental baseline is an assessment of the current status of the species and the condition of its habitat within the action area based on the aggregated effects of all past and ongoing human-caused and natural factors. The "action area" is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR 402.02). The action area for this consultation extends from approximately 200 feet upstream from the UPRR bridge in Pendleton, Oregon, to the furthest extent of both the turbidity plume generated by the Project (approximately 1 mile). The COE did not provide environmental baseline information. The following represents a summary of the best available information on the aquatic habitat conditions within the Umatilla subbasin.

The Umatilla River basin drains approximately 2,290 square miles. Headwaters originate on the slopes of the Blue Mountains at elevations as high as 4,950 feet. The river flows west-northwesterly across the semi-arid shrub steppe of the Deschutes-Umatilla plateau. It enters the Columbia River at an approximate elevation of 270 feet near the town of Umatilla, Oregon. Although the headwater topography is steep, most of the basin topography is gently sloping, with

expansive plateaus, steppes and rolling hills incised by narrow and steep-walled valleys. Mean annual precipitation ranges from 50 inches in the headwaters to 10 inches at the City of Umatilla.

Cultivation, grazing, forestry, urban development, and water storage and diversion for irrigation and flood control have dramatically degraded aquatic habitats throughout the Umatilla subbasin. The Northwest Power and Conservation Counsel (NPCC)(2004) characterized the watershed as having inadequate stream flows, excessive temperatures, excessive erosion, simplified and reduced instream habitat, and inadequate riparian cover. Many of the streams in the Umatilla River basin are on the Clean Water Act (CWA) 303(d) list for temperature, sediment, and nutrients (Oregon Department of Environmental Quality (ODEQ) 2001). However, the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) (2001) report that a limited amount of high quality salmonid habitat persists, especially at higher elevations.

Agricultural and urban development have led to widespread changes in vegetation throughout the basin. The most significant change has been the disappearance of large forested riparian areas along the Umatilla River and the conversion of native prairie to farmland (Kagan *et al.* 2000). ODEQ (2001) estimates that bottomland hardwood and willow communities have been reduced by 87% since 1850, and NPCC (2004) reports that 70% of all Umatilla River tributaries need riparian improvement.

Large-scale water developments such as the Bureau of Reclamation's (BOR) Umatilla Project of 1906, and the Umatilla Basin Project Act of 1988, have altered natural stream flows through water storage and irrigation diversions. Summer withdrawals annually subject large sections of the lower Umatilla River to extremely low flow conditions that often reduce the river to a series of disconnected pools (BOR 2001). ODEQ (2001) also reports the lack of water in many basin areas where the original General Land Office surveyors reported abundant springs and small creeks. Additionally, the NPCC (2004) reports that dikes, levees, and riprapped banks have straightened and channelized streams in many parts of the subbasin.

Many point and non-point pollution sources contribute to poor water quality within the basin. Point sources include 5 wastewater treatment plants that release effluent into the mainstem Umatilla. Non-point sources include urban and agricultural run-off laced with hydrocarbons, pesticides, and fertilizers. High sediment levels and turbidity from streambank erosion, and poor agricultural practices on highly erodible soils further degrade water quality.

Reduced riparian shading, increased channel width/depth ratios, reduced flows, and irrigation return flows all contribute to elevated stream temperatures. ODEQ found that Umatilla River basin stream temperatures often exceed state water quality standards between June and September. Water diversions, land use practices and stream channelization have reduced side channel access, habitat diversity, rearing space, food production areas, and longitudinal connectivity along stream courses (ODEQ 2001). Water quality conditions throughout the Umatilla River basin have been cited by ODEQ (2001) as a factor specifically linked to poor egg-to-smolt survival ratios.

The BOR (2001) evaluated environmental baseline conditions for the Umatilla River from McKay Creek to the mouth. This analysis begins immediately downstream from the action area and is believed to be representative of the action area as well. Following NOAA Fisheries' MPI, the BOR found that all the indicators they evaluated were either not properly functioning or were functioning at risk (2001). The results are shown in Table 2.

Other human impacts on MCR steelhead include the effects of hatcheries and of increasing fishing pressure. Hatcheries have been used in the Pacific Northwest for more than 100 years to bolster declining harvests, not to help endangered salmonids recover (NMFS 2001). Artificial production within the Umatilla subbasin began in 1966, and now includes summer steelhead, coho, and spring and fall Chinook salmon programs. The current plan is to annually release over 1,000,000 smolts into the mainstem Umatilla River (ODEQ 2001). However, there is concern that hatchery activities may impede the recovery of natural salmonid populations through genetic dilution and competition. Most steelhead returning to this region are hatchery fish. Although strict seasons and regulations that require the release of all wild steelhead were enacted to help reduce the take of listed fish, fishing pressure continues to increase within the basin and evidence suggests significant mortality occurs from hooking and handling stress experienced by released fish (Chilcote 1998).

The City of Pendleton provided limited environmental baseline information for the Project area in the Biological Information section of their project description. Their findings are similar to baseline information for the Umatilla subbasin at large. The Project is within the urban development zone of the City of Pendleton. The channel is approximately 150 feet wide. The bottom is bedrock mass with some cobbles and gravel. Flood control levees contain the river on both sides downstream from the Project site and along the southern (Project) side upstream. A UPRR bridge spans the river at the site and riprap surrounds the bases of the concrete trestle abutments on each bank. A small ODFW boat ramp and gravel parking lot are immediately upstream from the project area and a small ephemeral stream (Nelson Creek) empties into the river on the opposite bank. There is significant construction underway for a new Oregon Department Of Transportation (ODOT) bridge approximately 100 yards upstream, and for a railroad overpass just inland from the project site. Riparian vegetation is thin and extends 25 to 50 feet back from the edge of the channel. It consists mainly of silver maple, black alder, red-osier dogwood, wild rose, miscellaneous grasses, and deciduous shrubs. This reach of the river experiences low flows and heavy algal blooms during the summer. Salmonids typically use this reach as a migration corridor. Although no spawning and little juvenile rearing is expected due to the lack of spawning habitat, minimal instream structure, and high water temperatures, it is possible that out-migrating juveniles may hold in this reach if they become stranded by reduced flows.

Table 2. Summary of Environmental Baseline Conditions for the Umatilla River based on the Matrix of Pathways and Indicators. 1= McKay Creek to Stanfield Dam, 2= Stanfield Dam to Mouth (BOR 2001).

PATHWAYS: Indicators	**ENVIRONMENTAL BASELINE**		
	Properly Functioning	At Risk	Not Properly Functioning
Water Quality: Temperature		1	2
Sediment		1,2	
Chemical/Nutrient Contamination		1	2
Habitat Access: Physical Barriers		1,2	
Habitat Elements: Substrate		1,2	
Large Woody Debris			1,2
Pool Frequency			1,2
Pool Quality		1,2	
Off-Channel Habitat		1,2	
Refugia			1,2
Channel Conditions & Dynamics: Width/Depth Ratio			1,2
Streambank Cond.			1,2
Floodplain Connectivity		1,2	
Flow/Hydrology: Peak/Base Flows			1,2
Drainage Network Increase	N/A		
Watershed Conditions: Road Density & Location	N/A		
Disturbance History	N/A		
Riparian Reserves		1,2	

2.1.5 Effects of the Proposed Action

Effects of an action are: "The direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with

the action, that will be added to the environmental baseline" (50 CFR 402.02). Direct effects are those that occur during Project activities, and may extend upstream or downstream from the Project site, based on the potential for affecting the species' habitat. Indirect effects are those that are caused by the proposed action but occur sometime after the action is completed. Interrelated actions are those that are part of a larger action and depend on that larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration (50 CFR 402.02).

This project has the potential to cause direct effects and is reasonably certain to cause several indirect effects on MCR steelhead or their habitat. The use of riprap is known to have adverse effects on fish habitat, fish populations, and stream morphology (Schmetterling *et al.* 2001; Garland *et al.* 2002; US Fish and Wildlife Service 2000). The in-water and near-water construction activities are also expected to reduce riparian vegetation and to cause temporary increases of both sediment input and total suspended solids (TSS) into the water. Heavy machinery operation in or near the water also has the potential for introducing toxic contaminants into the Umatilla River. Harassment or harm of juvenile MCR steelhead may also occur if fish savage operations be required before filling the side channel.

Riprap and Rock Installation

The project entails the installation of approximately 200 cubic yards of riprap and rock below the OHWM along 155 feet of bank. This will have the direct effect of eliminating or degrading rearing habitat. This is particularly true where the City intends to fill the small riparian shaded side channel that provides low velocity off-channel habitat for rearing and migrating steelhead along the bank upstream from the trestle abutment. Both juvenile and adult salmonids require low velocity water for sheltering. Although large rock may provide some inter-rock habitat features that may be used by salmonids, evidence is growing that fish densities are greater along natural banks than along rocked banks, especially for sub-yearling salmonids (Schmetterling 2001; U.S. Fish and Wildlife Service 2000). Riprap can also reduce habitat quality by preventing or limiting the establishment of natural streamside vegetation that is important to healthy fish habitat (Schmetterling *et al.* 2001; Bjornn and Reiser 1991). Although it is unlikely that many juvenile MCR steelhead will present during construction, it is reasonable to expect that some may be present. If so, the placement of riprap and rock into the side channel and river may crush or otherwise injure fish.

Altered stream hydraulics and morphology are potential indirect effects of installing the riprap. Hydrological effects of the riprap may be minimal because the project site is along an apparent depositional stretch of the river. However, the placement of riprap will increase water velocities at the streambank interface by decreasing channel roughness. The new riprap may also cause some channel constriction and a corresponding increase in water velocity in the channel. Unexpected hydrological interactions between this Project and the ODOT bridge construction taking place approximately 100 yards upstream are also possible. Both of these scenarios have the potential to redirect the thalweg, modify channel morphology, and accelerate bank erosion above and below the Project site.

Riparian Disturbances

Project construction necessitates the disturbance and/or removal of riparian vegetation including several small to medium sized trees and shrubs from under the trestle and along the lower upstream bank. Juvenile salmonids require a complex habitat that includes riparian cover and large woody debris to provide shade, shelter from high velocity stream flows, and protection from predators. The loss of this riparian vegetation will reduce shade and bankside cover for juvenile salmonids and eliminate habitat for insects that are a food source for those young fish. The loss of vegetation will result in less large woody debris recruitment in the future, which in turn further simplifies the aquatic habitat in a reach of the river that has already been subjected to intense channelization. City planners intend to replant and reseed disturbed areas in an effort to restabilize the area and reduce erosion. However, much of the lost streamside vegetation cannot be replanted because riprap and the new pathway will cover the ground along the water's edge. Although this lost riparian area is relatively small in size, it does include a section of ideal off-channel habitat. Future salmonid avoidance of this part of the riverbank is a likely effect due to the loss of the side channel and the reduction in riparian cover.

Sediment Input and Total Suspended Solids (TSS)

Project construction will create temporary areas of bare soil where the bank must be cut for the pathway and where the heavy equipment use will disturb the soil. Sediments may also be mobilized during the placement of riprap fill. Increased sediment input into the river can have direct negative effects on MCR steelhead if they are present during construction. Salmonid gill flaring and feeding changes have been observed in response to pulses of suspended sediment (Berg and Northcote 1985) and turbidity plume avoidance has been observed in salmonids and other fish (DeVore *et al.* 1980; Sigler *et al.* 1984; Lloyd 1987; Llyod *et al.* 1987; Servizi and Martens 1991). Also, chronic exposure to high turbidity levels may injure or even kill fish (Spence *et al.* 1996). However, given the expectation for low stream flows and limited precipitation during the planned work window and the planned measures to reduce erosion and sediment flow to the river, sediment input is expected to be minimal, localized, and of short duration. When combined with the unlikelihood of significant steelhead presence during construction activities, the direct impacts of increased TSS and sedimentation on ESA-listed salmonids are expected to be minimal.

Toxic Contamination

Fuels or other contaminants could potentially enter the river from spills associated with the use of heavy equipment in or near the stream. Fuel and lubricant spills that enter a waterbody directly or through the adjacent riparian zone can injure or kill aquatic organisms. Petroleum-based contaminants, such as fuels, oils, and some hydraulic fluids, contain polycyclic aromatic hydrocarbons (PAHs). These compounds can be acutely toxic to salmonids and can cause lethal and acute and chronic sublethal effects on other aquatic organisms (Neff 1985). The risk of chemical contamination during in-water work activities will be minimized by restricting the majority of construction activities to the top of or immediately beside existing riprap or railroad structures, and by ensuring fueling and servicing operations are conducted at an appropriate site at least 150 feet from any running water. The potential for direct mortality of ESA-listed salmonids from chemical contamination should be negligible with these precautions in place.

Fish Salvage

Direct effects on juvenile MCR steelhead will occur in the form of harassment, physical harm, or death if a fish salvage operation is necessary to remove them from the action area. If required, a qualified biologist will remove stranded fish from the side channel habitat area by netting, seining, trapping, or electrofishing. The capture and transfer of these fish will create stress and may cause direct physical injury or death. Stress approaching or exceeding the physiological tolerance limits of individual fish can impair reproductive success, growth, resistance to infectious diseases, and may cause mortality (Wedemeyer *et al.* 1990). Electrofishing is particularly stressful to fish. Harmful effects are detailed by Snyder (2003) and include internal and external hemorrhage, fractured spines, and death. Due to the expected low flows and the low probability of significant steelhead presence in the action area during the work window, a fish salvage operation is unlikely and it will likely impact few individuals if required.

Summary

As described above, this project has the potential to cause several direct effects on juvenile MCR steelhead if they are present in the action area during construction. However, few MCR steelhead, typically late out-migrating smolts that become stranded by low flows, are expected in the action area during the planned construction period. Indirect effects from the loss of side-channel habitat and steelhead avoidance of the area due to reduced riparian cover and increased bank-side water velocity are more certain to occur.

2.1.6 Cumulative Effects

"Cumulative effects" are defined in 50 CFR 402.02 as those effects of "future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation."

Several activities that have the potential to impact fish and habitat within the action area are occurring, and are reasonably certain to continue in the future, on private lands within the Umatilla River watershed. These activities include urban growth, timber harvest, agriculture, grazing, and water withdrawal for irrigation.

Between 1990 and 2000, the population of Umatilla County increased by 19.1%.[1] Thus, NOAA Fisheries assumes that future private and state actions will continue within the action area, but at increasingly higher levels as population density climbs and development pressures on natural resources increase. Similarly, livestock grazing and water withdrawal for irrigation are likely to occur at present or higher levels for the foreseeable future.

[1] U.S. Census Bureau, State and County Quickfacts, Umatilla County, Oregon. Available at: http://quickfacts.census.gov/qfd/states/41/41059.html

2.1.7 Conclusion

NOAA Fisheries has determined that when the effects of the subject action addressed in this Opinion are added to the environmental baseline and cumulative effects occurring in the action area, they are not likely to jeopardize the continued existence of MCR steelhead.

NOAA Fisheries' conclusions are based on the following considerations: (1) All instream work will occur during the ODFW in-water work window for this area (July 15 to October 15); (2) the affected area will be small and instream work will be limited to that described in the biological assessment (BA); (3) with the exception of the area covered by new riprap and pathway, the streambank and construction area will be stabilized and restored to pre-construction conditions; and (4) with the exception of the area covered by new riprap and pathway, the disturbed riparian areas will be replanted with native vegetation. Thus, the proposed action is not expected to impair habitats that are functioning properly, appreciably reduce the functioning of already impaired habitats, or retard the long-term progress of impaired habitats toward proper functioning condition essential to the long-term survival and recovery at the population or ESU scale.

2.1.8 Conservation Recommendations

Conservation recommendations are defined as "discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information" (50 CFR 402.02). Section 7 (a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. NOAA Fisheries has the following conservation recommendations:

- The City of Pendleton should identify a stretch of hardened riverbank that can be safely restored to a natural condition and convert it to off-channel habitat to replace the side channel habitat that was permanently destroyed by the riprap fill for this Project. The ideal location would be along the same river reach as the Project site, and should be equal to or larger than the lost habitat.

2.1.9 Reinitiation of Consultation

As provided in 50 CFR 402.16, reinitiation of formal consultation is required if: (1) The amount or extent of taking specified in the incidental take statement is exceeded, or is likely to be exceeded; (2) new information reveals effects of the action may affect listed species in a way not previously considered; (3) the action is modified in a way that causes an effect on listed species that was not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operation causing such take must cease, pending conclusion of the reinitiated consultation. This Opinion and incidental take statement cover the described actions if conducted within 5 years of the signature date. Any activities not completed by that date will

require subsequent consultation. To reinitiate consultation with NOAA Fisheries, the COE must contact the Habitat Conservation Division of NOAA Fisheries, Oregon State Habitat Office and refer to NOAA Fisheries No.: **2004/00368**.

2.2 Incidental Take Statement

The ESA at section 9 [16 USC 1538] prohibits take of endangered species. The prohibition of take is extended to threatened anadromous salmonids by section 4(d) rule [50 CFR 223.203]. Take is defined by the statute as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct" [16 USC 1532(19)]. Harm is defined by regulation as "an act which actually kills or injures fish or wildlife. Such an act may include significant habitat modification or degradation which actually kills or injures fish or wildlife by significantly impairing essential behavior patterns, including, breeding, spawning, rearing, migrating, feeding or sheltering" [50 CFR 222.102]. Harass is defined as "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering" [50 CFR 17.3]. Incidental take is defined as "takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant" [50 CFR 402.02]. The ESA at section 7(o)(2) removes the prohibition from any incidental taking that is in compliance with the terms and conditions specified in a section 7(b)(4) incidental take statement [16 USC 1536].

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply to implement the reasonable and prudent measures.

2.2.1 Amount or Extent of the Take

The proposed action is reasonably certain to result in the incidental take of juvenile MCR steelhead. NOAA Fisheries is reasonably certain the incidental take described here will occur because: (1) The listed species is known to occur in the action area; and (2) the proposed action is likely to cause impacts significant enough to cause death or injury, impair feeding, breeding, migrating, or sheltering for the listed species.

Some level of incidental take is possible in the form of harassment, injury, or death of juvenile MCR steelhead during instream work. Temporary increases in sediment and turbidity may cause avoidance of the Project area and incidental take, in the form of lethal or sublethal injury may occur during riprap placement or if toxins are introduced into the water. NOAA Fisheries also expects the habitat-related effects of these actions to cause some low level of incidental take due to the loss of off-channel habitat and reductions in riparian vegetation that result from construction activities. However, because of the inherent biological characteristics of aquatic species such as MCR steelhead, take attributable to this action cannot be quantified by the number of fish harassed, harmed, or killed. In instances such as these, the NOAA Fisheries

designates a quantified habitat surrogate. The amount of disturbed habitat is an area approximately 155 feet by 20 feet of streambank and bed along the Project side of the Umatilla River. Take caused by the proposed action is also likely to continue downstream to the extent of the generated turbidity plume, approximately one mile.

Fish salvage may cause quantifiable levels of take if it is required. However, given the relatively short length of affected side channel, and the unfavorably high water temperatures typical during the in-water work window, NOAA Fisheries expects few listed fish to be present in the side channel during construction. Because few fish are expected to be present, the take of ESA-listed salmonids due to fish salvage should not exceed 20 juveniles handled and no more than two killed.

This exemption from the take prohibition includes only take caused by the proposed action as described in the BA and above, within the action area as defined in this Opinion.

2.2.2 Effect of Take

In this Opinion, NOAA Fisheries determines that this level of anticipated take is not likely to result in jeopardy to MCR steelhead.

2.2.3 Reasonable and Prudent Measures

NOAA Fisheries believes that the following reasonable and prudent measures are necessary and appropriate to minimize the impact of incidental taking on the above species. The COE, in respect to their proposed or ongoing activities addressed in this Opinion, shall:

1. Avoid or minimize take resulting from general construction activities, riparian disturbance, and in-water work required to complete the proposed Project addressed in this Opinion.

2. Avoid or minimize the likelihood of incidental take from any source of toxic contamination from leaks or spills into and within watercourses.

3. Minimize the amount and extent of incidental take resulting from fish salvage operations.

4. Monitor the effects of the proposed action to confirm this Opinion is achieving its objective of avoiding or minimizing take from permitted actions.

2.2.4 Terms and Conditions

To be exempt from the prohibitions of section 9 of the ESA, the action must be carried out in compliance with the following terms and conditions, which implement the reasonable and prudent measures described above for each category of activity. These terms and conditions are non-discretionary.

1. To implement reasonable and prudent measure #1 (general construction, riparian disturbance, and in-water work), the COE shall ensure that:

   a. Minimum area. Confine construction impacts to the minimum area necessary to complete the Project.
   b. Timing of in-water work. Work below the bankfull elevation[2] will be completed using the most recent ODFW-preferred in-water work period for the Project area (presently July 15 to October 15).
   c. Cessation of work. Cease Project operations under high flow conditions that may inundate the Project area, except for efforts to avoid or minimize resource damage.
   d. Preconstruction activity. Complete the following actions before significant[3] alteration of the Project area.
      i. Marking. Flag the boundaries of clearing limits associated with site access and construction to prevent ground disturbance of critical riparian vegetation, wetlands and other sensitive sites beyond the flagged boundary.
      ii. Emergency erosion controls. Ensure that a supply of sediment control materials (*e.g.*, silt fence, straw bales[4]) for emergency erosion control is on site.
      iii. Temporary erosion controls. All temporary erosion controls will be in place and appropriately installed downslope from Project activity within the riparian area until site restoration is complete.
      iv. General erosion control. Employ appropriate practices to prevent erosion and sedimentation associated with access roads, stream crossings, drilling sites, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, staging areas, and roads being decommissioned.
      v. Inspection of erosion controls. During construction, monitor instream turbidity and inspect all erosion controls daily during the rainy season and weekly during the dry season, or more often as necessary, to ensure the erosion controls are working adequately.[5]

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[2] 'Bankfull elevation' means the bank height inundated by a 1.5 to 2-year average recurrence interval and may be estimated by morphological features such average bank height, scour lines and vegetation limits.

[3] 'Significant' means an effect can be meaningfully measured, detected or evaluated.

[4] When available, certified weed-free straw or hay bales will be used to prevent introduction of noxious weeds.

[5] 'Working adequately' means that Project activities do not increase ambient stream turbidity by more than 10% above background 100 feet below the discharge, when measured relative to a control point immediately upstream from the turbidity causing activity.

(1) If monitoring or inspection shows that the erosion controls are ineffective, mobilize work crews immediately to make repairs, install replacements, or install additional controls as necessary.
(2) Remove sediment from erosion controls once it has reached 1/3 of the exposed height of the control.

e. Site preparation. Conserve native materials for site restoration.
i. If possible, leave native materials where they are found.
ii. Where vegetation must be removed, such as for equipment access, cut it to ground level and leave the root system intact whenever possible.
iii. If materials are moved, damaged or destroyed, replace them with a functional equivalent during site restoration.
iv. Stockpile any large wood,[6] native vegetation, weed-free topsoil, and native channel material displaced by construction for use during site restoration.

f. Earthwork. Complete earthwork (including drilling, excavation, dredging, filling and compacting) as quickly as possible.
i. Heavy equipment. When heavy equipment will be used, the equipment selected will have the least adverse effects on the environment (*e.g.*, minimally sized, low ground pressure equipment).
ii. Site stabilization. Stabilize all disturbed areas before any break in work expected to exceed 4 days.
iii. Source of materials. Obtain boulders, rock, woody materials and other natural construction materials used for the Project from outside the riparian area.

g. Pesticides and fertilizers. Do not apply surface fertilizers, herbicides, or other pesticides within 200 feet of any stream channel.

2. To implement reasonable and prudent measure #2 (pollution control), the COE shall ensure that:

a. Pollution Control Plan. Prepare and carry out a pollution and erosion control plan to prevent pollution caused by surveying or construction operations. The plan must be available for inspection on request by NOAA Fisheries.
i. Plan Contents. The pollution and erosion control plan will contain the pertinent elements listed below, and meet requirements of all applicable laws and regulations.
(1) The name and address of the party(s) responsible for accomplishment of the pollution and erosion control plan.

[6] For purposes of this Opinion only, 'large wood' means a tree, log, or rootwad big enough to dissipate stream energy associated with high flows, capture bedload, stabilize streambanks, influence channel characteristics, and otherwise support aquatic habitat function, given the slope and bankfull channel width of the stream in which the wood occurs. See Oregon Department of Forestry and Oregon Department of Fish and Wildlife, *A Guide to Placing Large Wood in Streams*, May 1995 (www.odf.state.or.us/FP/RefLibrary/LargeWoodPlacemntGuide5-95.doc).

(2) Practices to confine, remove and dispose of excess concrete, cement, grout, and other mortars or bonding agents, including measures for washout facilities.

(3) A description of any regulated or hazardous products or materials that will be used for the Project, including procedures for inventory, storage, handling, and monitoring.

(4) A spill containment and control plan with notification procedures, specific cleanup and disposal instructions for different products, quick response containment and cleanup measures that will be available on the site, proposed methods for disposal of spilled materials, and employee training for spill containment.

(5) Practices to prevent construction debris from dropping into any stream or waterbody, and to remove any material that does drop with a minimum disturbance to the streambed and water quality.

ii. Vehicle and material staging. Store construction materials and fuel and operate, maintain, and store vehicles as follows.

(1) To reduce the staging area size and the potential for contamination, store on site only enough supplies and equipment to complete a specific job.

(2) Store fuel and conduct all equipment staging, cleaning, maintenance, and refueling operations in a staging area at least 150 feet away from the creek bank.

(3) Before operation, inspect daily all equipment to be operated within 150 feet of the creek bank. Check for, repair, and clean any fluid leaks before leaving the vehicle staging area. Document inspections in a record that is available for review on request by NOAA Fisheries.

(4) Before operations begin, and as often as necessary, steam clean all equipment that will be used below bankfull elevation until all visible oil, grease, mud, and other contaminants are removed.

(5) Diaper all stationary power equipment (*e.g.*, generators, cranes, stationary drilling equipment) operated within any riparian area to prevent leaks, unless suitable containment is provided to prevent potential spills from entering any stream or waterbody.

b. Floating Boom. Whenever surface water is present, deploy an oil-absorbing, floating boom around any equipment that could leak contaminants.

c. Construction discharge water. Treat all discharge water created by construction (*e.g.*, concrete washout, pumping for work area isolation, vehicle wash water, drilling fluids) as follows.

i. Water quality. Design, build, and maintain facilities to collect and treat all construction discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals and other pollutants likely to be present.

ii. Discharge velocity. If construction discharge water is released using an outfall or diffuser port, velocities may not exceed 4 feet per second, and the maximum size of any aperture may not exceed 1 inch.

iii. Pollutants. Do not allow pollutants, including green concrete, contaminated water, silt, welding slag, sandblasting abrasive, or grout cured less than 24 hours, to contact any wetland or the 2-year floodplain.

3. To implement reasonable and prudent measure #3 (fish salvage), the COE shall ensure that:

a. Fish screens. Install, operate, and maintain, according to NOAA Fisheries' fish screen criteria[7], a fish screen on any water intake used for Project construction. This includes pumps used to isolate the in-water work area. Screens for water diversions or intakes that will be used for irrigation, municipal or industrial purposes, or any use besides Project construction are not authorized.

b. Capture and release. Fish Handling and Transfer Protocols – Where the capture, removal, and relocation of ESA-listed fish are required, the COE shall ensure that:

i. Have an ODFW fisheries biologist experienced with work area isolation and competent to ensure the safe handling of all ESA-listed fish conduct or supervise the operation

ii. Use one, or a combination, of the following methods to most effectively capture ESA-listed fish and minimize harm.

(1) Hand Netting. Collect fish by hand or dip nets, as the area is slowly dewatered.

(2) Seining. Seine using a net with mesh of such a size as to ensure entrapment of the residing ESA-listed fish.

(3) Minnow Trap. Place minnow traps overnight and in conjunction with seining.

(4) Electrofishing. If used, follow NOAA Fisheries guidelines for electrofishing[8]. Note that electrofishing should only be used as a last resort.

iii. Fish Storage and Release. Where the capture, removal, and relocation of ESA-listed fish are required, the COE shall ensure that:

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[7] National Marine Fisheries Service, *Juvenile Fish Screen Criteria* (revised February 16, 1995) and *Addendum: Juvenile Fish Screen Criteria for Pump Intakes* (May 9, 1996) (guidelines and criteria for migrant fish passage facilities, and new pump intakes and existing inadequate pump intake screens) (http://www.nwr.noaa.gov/1hydrop/hydroweb/ferc.htm).

[8] National Marine Fisheries Service, Backpack Electrofishing Guidelines (December 1998) (http://www.nwr.noaa.gov/1salmon/salmoesa/pubs/electrog.pdf).

(1) Handle captured fish with extreme care and keep them in water to the maximum extent possible during transfer procedures. Use of a sanctuary net is recommended.[9]
(2) Utilize large buckets (5-gallon or greater) and minimize the number of fish stored in each bucket to prevent overcrowding.
(3) Place large fish in buckets separate from smaller fish.
(4) Maintain appropriate water temperature in holding buckets and monitor the condition of captured fish.
(5) Release fish in the closest pool or area that provides appropriate cover and flow refuge after fish have recovered from the stress of capture.
(6) Document all fish injuries or mortalities.

4. To implement reasonable and prudent measure #4 (monitoring), the COE shall ensure that:

a. Instream work documentation. Monitor and document all instream work as necessary to describe the COE's success in meeting the terms and conditions contained in this Opinion.
b. Reporting. Submit an instream construction monitoring report to NOAA Fisheries within one year of Project completion. The construction monitoring report shall include the following information.
i. Project identification
(1) Project name.
(2) COE contact person.
(3) Starting and ending dates for work completed.
ii. Photo documentation. Photos of habitat conditions at the Project site before, during, and after Project completion.[10]
(1) Include general views and close-ups showing details of the Project and Project area, including pre and post construction.
(2) Label each photo with date, time, Project name, photographer's name, and a comment about the subject.
iii. Other data. Additional Project-specific data as appropriate.
(1) Work cessation. Dates work ceased due to high flows, if any.
(2) Pollution control. A summary of pollution and erosion control measures used, inspections, any erosion control failures or contaminant releases, and corrective efforts.

[9] A sanctuary net is a net that has a solid bottom bag that allows for the retention of a small amount of water in the net, thus allowing for less potential impact to netted fish from the net mesh.

[10] Relevant habitat conditions may include characteristics of channels, eroding and stable streambanks in the Project area, riparian vegetation, water quality, flows at base, bankfull and over-bankfull stages, and other visually discernable environmental conditions at the Project area, and upstream and downstream from the Project.

(3) Site preparation.
  (a) Total cleared area – riparian and upland.
  (b) Total new impervious area.
(4) Isolation of in-water work area, capture and release.
  (a) Stream conditions before, during, and one week after completion of work area isolation.
  (b) Methods of work area isolation and take minimization.
(5) Fish screen. Evidence of compliance with NOAA Fisheries' fish screen criteria.
(6) Fish stranding. The number of fish observed stranded in or below the Project area and any mortality that occurred due to salvage efforts to relocate these fish.
  (a) Supervisory fish biologist – name and address.
  (b) Method used to capture stranded fish.
  (c) Number of each listed species captured.
  (d) Location and condition of all fish released.
  (e) Any incidence of injury or mortality of listed species.
(7) Fish passage. An assessment of the ability of fish to pass through the Project area during various stream flow conditions.
(8) Site restoration. Photos or other documentation that site restoration performance standards were met.

c. Physical Channel Alteration. Provide information, including photographs, summarizing the effectiveness of the Project design in meeting the bank restabilization goals. If any Project elements fail, provide information on the effects of this failure on salmonid habitat and stream channel morphology.

d. Effectiveness monitoring. Gather any other data or analyses the COE deems necessary or helpful to complete an assessment of habitat trends in stream and riparian conditions as a result of this Project.

e. Lethal take. If a sick, injured, or dead specimen of a threatened or endangered species is found, the finder must notify the Vancouver Field Office of NOAA Fisheries Law Enforcement at (360) 418-4246. The finder must take care in handling sick or injured specimens to ensure effective treatment, and in handling dead specimens to preserve biological material in the best possible condition for later analysis of cause of death. The finder is also responsible for following instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not disturbed unnecessarily.

f. Report submission. Submit a copy of the report to the Oregon State Habitat Office of NOAA Fisheries.

Oregon State Director
Habitat Conservation Division
National Marine Fisheries Service
Attn: 2004/00368
525 NE Oregon Street, Ste. 500
Portland, OR 97232

3. MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

3.1 Background

The MSA, as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), requires the inclusion of EFH descriptions in Federal fishery management plans. In addition, the MSA requires Federal agencies to consult with NOAA Fisheries on activities that would adversely affect EFH.

EFH means those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity (MSA §3). For the purpose of interpreting the definition of EFH: "Waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities; "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle (50 CFR 600.110).

Section 305(b) of the MSA (16 U.S.C. 1855(b)) requires that:

- Federal agencies must consult with NOAA Fisheries on all actions or proposed actions authorized, funded, or undertaken by the agency, that may adversely affect EFH;

- NOAA Fisheries shall provide conservation recommendations for any Federal or state activity that may adversely affect EFH;

- Federal agencies shall, within 30 days after receiving conservation recommendations from NOAA Fisheries, provide a detailed response in writing to NOAA Fisheries regarding the conservation recommendations. The response shall include a description of measures proposed by the agency for avoiding, mitigating or offsetting the impact of the activity on EFH. In the case of a response that is inconsistent with the conservation recommendations of NOAA Fisheries, the Federal agency shall explain its reason for not following the recommendations.

The MSA requires consultation for all actions that may adversely affect EFH, and does not distinguish between actions within EFH and actions outside EFH. Any reasonable attempt to encourage the conservation of EFH must take into account actions that occur outside EFH, such as upstream and upslope activities, that may have an adverse effect on EFH. Therefore, EFH consultation with NOAA Fisheries is required by Federal agencies undertaking, permitting or funding activities that may adversely affect EFH, regardless of its location.

3.2 Identification of EFH

The Pacific Fisheries Management Council (PFMC) has designated EFH for three species of Pacific salmon: Chinook (*Oncorhynchus tshawytscha*); coho (*O. kisutch*); and Puget Sound pink salmon (*O. gorbuscha*) (PFMC 1999). Freshwater EFH for Pacific salmon includes all those streams, lakes, ponds, wetlands, and other waterbodies currently or historically accessible to salmon in Washington, Oregon, Idaho, and California, except areas upstream from certain impassable man-made barriers (as identified by the PFMC), and longstanding, naturally-impassable barriers (*e.g.*, natural waterfalls in existence for several hundred years). Detailed descriptions and identifications of EFH for salmon are found in Appendix A to Amendment 14 to the *Pacific Coast Salmon Plan* (PFMC 1999). Assessment of potential adverse effects on these species' EFH from the proposed action is based on this information.

3.3 Proposed Actions

The proposed action is detailed above in section 1.2 of the ESA portion of this Opinion. The action area includes watersheds within the Umatilla River subbasin. This area has been designated as EFH for various life stages of Chinook salmon.

3.4 Effects of Proposed Action

The effects on Chinook salmon habitat are described in detail in section 2.1.5 of this document. The proposed action may result in short-term adverse effects on a variety of habitat parameters. These adverse effects are:

1. Loss of side channel habitat due to placement of riprap fill.

2. Loss of streambank riparian cover due to placement of riprap fill and temporary riparian disturbance from construction area access and construction activities performed from the bank.

3. Increased sedimentation from instream construction activities.

3.5 Conclusion

NOAA Fisheries believes that the proposed action may adversely affect EFH for Chinook salmon.

3.6 EFH Conservation Recommendations

Pursuant to section 305(b)(4)(A) of the MSA, NOAA Fisheries is required to provide EFH conservation recommendations for any Federal or state agency action that would adversely affect EFH. The conservation measures proposed for the project by the applicant and the terms and conditions described in the incidental take statement that is attached to the ESA Conference

Opinion for this project are all applicable to salmon EFH, except those relating to work timing, isolation of the in-water work area, fish salvage (capture and release), and the disposition of any individual fish killed or injured during completion of the project. With those exceptions, NOAA Fisheries incorporates those conservation measures and terms and conditions here as EFH conservation recommendations. Additionally, NOAA Fisheries recommends that the City of Pendleton identify a stretch of hardened riverbank that can be safely restored to a natural condition and convert it to off channel habitat to replace the side channel habitat that was permanently destroyed by the riprap fill for this Project.

3.7 Statutory Response Requirement

The MSA (section 305(b)) and 50 CFR 600.920(j) requires the COE to provide a written response to NOAA Fisheries' EFH conservation recommendations within 30 days of its receipt of this letter. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse impacts of the activity on EFH. If the response is inconsistent with NOAA Fisheries' conservation recommendations, the COE shall explain its reasons for not following the recommendations.

3.8 Supplemental Consultation

The COE must reinitiate EFH consultation with NOAA Fisheries if either the action is substantially revised or new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations (50 CFR 600.920).

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